PB82-196551

Contracting for Professional Services

(U.S.) Environmental Protection Agency
Washington, DC

Feb 82

U.S. Department of Commerce
National Technical Information Service
NTIS.

United States
Environmental Protection
Agency

Office of Water
Programs Operations (WH-547)
Washington, DC 20460

February 1982
EPA-430/9-82-005

PB82-196551

Water and Waste Management

EPA

Contracting For Professional Services

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA 22161

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO.	2.	3. RECIPIENT'S ACCESSION NO.
		PB82 196551

4. TITLE AND SUBTITLE	5. REPORT DATE
Contracting for Professional Services	February 1982
	6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S)	8. PERFORMING ORGANIZATION REPORT NO.
	430/9-82-005
9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT NO.
Same as 12.	2BG 647
	11. CONTRACT/GRANT NO.
12. SPONSORING AGENCY NAME AND ADDRESS Office of Water Program Operations U.S. Environmental Protection Agency Washington, D.C. 20460	13. TYPE OF REPORT AND PERIOD COVERED Technical Report
	14. SPONSORING AGENCY CODE 700/02

15. SUPPLEMENTARY NOTES

16. ABSTRACT

This manual discusses the procedures for obtaining better and more cost-effective services in seeking contractors.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Water Pollution Control	Contracting Management and Operations	

18. DISTRIBUTION STATEMENT	19. SECURITY CLASS *(This Report)*	21. NO. OF PAGES
	20. SECURITY CLASS *(This page)*	22. PRICE

EPA Form 2220-1 (Rev. 4-77) PREVIOUS EDITION IS OBSOLETE

CONTRACTING FOR PROFESSIONAL SERVICES

CONTRACTING FOR PROFESSIONAL SERVICES

TABLE OF CONTENTS

INTRODUCTION 1

REQUIREMENTS DEFINITION 3

REQUEST FOR QUALIFICATIONS 4

- ELEMENTS OF THE QUALIFICATIONS REQUEST 4
- SOLICIT QUALIFICATIONS FROM INTERESTED FIRMS 4
- EVALUATE QUALIFICATION STATEMENTS 5
- SELECT PROSPECTIVE CONSULTANTS 5

REQUEST FOR PROPOSALS 6

- DEVELOP REQUEST FOR PROPOSAL 6
- CONDUCT PRELIMINARY INTERVIEWS 8
- EVALUATE PROPOSALS 9
- CONDUCT FINAL INTERVIEWS 10

CONTRACT NEGOTIATIONS 10

- SCOPE OF SERVICES 11
- CONTRACTING METHOD 11
  - FIXED PRICE 11
  - TIME AND MATERIALS 12
  - COST PLUS FIXED FEE 12
- FINAL AGREEMENT ON PRICE 12
- CONTRACT TERMS AND CONDITIONS 13

TABLE OF CONTENTS
(Continued)

- KEY PERSONNEL 13
- SUBCONTRACTORS 13
- PENALTIES 13
- TERMINATION RIGHTS 14
- METHOD OF PAYMENT 14

PROJECT MANAGEMENT 14

REFERENCES 15

CONTRACTING FOR PROFESSIONAL SERVICES

INTRODUCTION

Many problems encountered by wastewater utilities require the use of consultants to provide services, technical expertise, and/or resources not available to the utility. For example, these services may be needed for:

- diagnostic evaluations to identify utility problems and to develop solutions;
- design of new or modified facilities; and
- financial, accounting, legal, management information systems or other specialized services.

In addition to the need for specialized resources, consultants may be required in special situations when:

- an independent evaluation or second opinion is required; and
- an authoritative report is required by or for the governing body or regulatory agency.

Whatever the reason for seeking professional services, the utility is faced with two basic tasks:

- identifying and selecting the consultant best qualified to meet the utilities' need; and
- ensuring that the consultant understands and provides for the utility's specific needs in the most cost-effective manner.

These tasks can be difficult and time consuming to accomplish. The objective of this manual is to present a systematic set of proven contract procedures that help to achieve these tasks. At the same time, the manual addresses the most common issues and problems that can arise and provides guidance on how to minimize or avoid them.

The discussion focuses on obtaining specialized professional services and does not address long-term contracting for performing plant operations, maintenance, laboratory services, and so forth.

Most utilities and/or local governments have specific legal requirements or contracting requirements that must be followed when contracting for professional services. Because these requirements and practices vary widely across the country, the procedures presented here are a "best set" which can

be modified for local use. In addition Federal and state grant requirements also vary from program to program. Specific agency requirements should be reviewed prior to procurement of professional services that are to be paid in part by Federal funds.

Following is a summary of the basic steps to follow when contracting for professional services and the principal issues and questions that arise at each step in the process.

Questions and Issues When Contracting for Professional Services	Contracting Process	
When and why should a utility use outside professional services?	Step 1	Requirements Definition
How can a utility communicate its needs to prospective consultants?	Step 2	Request for Qualifications
		Select prospective consultants
How can a utility identify and evaluate qualified professionals?	Step 3	Request for Proposal
		Evaluate and select consultants
How can the utility ensure that it achieves the best possible price for services rendered?	Step 4	Contract Negotiation
What types of contracts should be used, and what are the significant contract terms and conditions that should be considered?		
How can the contract be monitored and controlled?	Step 5	Project Management

There are situations when it is not necessary to use all of these procedures or when sufficient time is not available. For example, if a plant engineering task is required and the utility has a longstanding relationship with a qualified engineering firm, a contract can be negotiated on a "sole source" basis. Caution should be exercised, however, not to request such firms or consultants to perform tasks outside their field in areas in which they have only a passing knowledge. In most cases, taking the time to use the procedures in this manual will result in obtaining better and more cost-effective services.

The balance of this manual discusses each step in the process and the issues and problems that can be encountered.

REQUIREMENTS DEFINITION

Before a utility solicits consulting services, it is essential that it have clear and specific answers for the following questions:

- What needs to be done?
- Why does it need to be done?
- Why should a consultant do it?
- What level of effort will be required to do it?

In some cases the answers to these questions are straightforward. For example, if management has made the decision to build a new interceptor and the utility has no design staff, the need for a design consultant is clear.

In many cases, however, the answers will not be straightforward. For example, if the utility has a compliance problem, does it need a design consultant, a management consultant, or a process control consultant? Does it need a consultant to identify the problem, or is the problem already identified?

If these questions are not answered before consultants are retained, there is little chance that the consultants' skills and services can be used successfully. As a result, a utility or local government should carry out the following procedures before moving to Step 2, Request for Qualifications:

- The technical persons most familiar with the perceived area of need should write down what they believe needs to be done, and what qualifications and resources are required to do it.
- A joint management/technical review of the needs statement should be made and the following questions answered:
  - Is this the actual need and is it sufficiently defined?
  - If so, can we do it ourselves or do we need a consultant because we:
    - have technical limitations?
    - have limited resources?
    - need an independent opinion?
    - have other limitations or needs?
- A specific statement of work and qualifications requirements should be developed and subjected to a final review.

REQUEST FOR QUALIFICATIONS

The request for qualifications step is conducted to:

- limit proposals to a small group of prequalified consultants; and
- reduce resource expenditures for both consultants and the utility by avoiding proposal development and review of proposals from unqualified firms.

The request for qualifications and selection of potential consultants is accomplished as follows.

Elements of the Qualifications Request

A request for qualifications statement should include:

- a brief description of the problem and the nature of the services sought.
- the minimum qualifications required including:
  - experience of the organization;
  - experience of each professional who would participate; and
  - references for both the organization and the proposed staff (including contact names and telephone numbers).
- the time frame in which the work is to be performed.

Solicit Qualifications from Interested Firms

A formal advertisement should be published containing all necessary information to enable prospective consultants to respond. The advertisement should also include a specific cutoff date after which submissions will not be accepted. Normally 15 working days from the date of the advertisement should be sufficient.

To ensure that qualified submissions will be received, the advertisements should be placed in appropriate publications:

- for local general consultants - the local newspaper.
- for national general consultants - Commerce Business Daily.
- for engineering services - appropriate engineering journals and/or Engineering News Record.
- for other specialty areas - appropriate trade journals.

Evaluate Qualifications Statements

Consulting firms in the same field vary substantially in experience, training, skills, capabilities, personnel, workload, and particular specialties. Before screening and selecting prospective consultants, the utility should set up a review team and establish a uniform set of criteria to be used by each reviewer.

The review team should have at least three members. At least one member should be a technical person in the area for which services are sought and one should be a management member.

The criteria that the utility should establish should include the following:

- Experience of the personnel specifically committed to the project:
  - years
  - similar projects
  - education
- Number of qualified personnel offered
- Location and availability of personnel
  - will they have to travel short distances or long distances?
- Experience of the firm
  - years in the field
  - similar projects in scope and size
- References
  - did the firm perform as expected?
  - on time?
  - within budget?
  - with demonstrated professionalism?

Select Prospective Consultants

Each review committee member should independently evaluate and rank in order each submission based upon the uniform criteria using a standard work sheet. The committee should meet, compare evaluations and rankings, and

develop a consolidated ranking. The top three to five firms should be selected as qualified prospective consultant unless the committee feels that no qualified submissions were received. In such a case, the qualification submission procedures should be repeated.

Each step of the selection process should be thoroughly documented. Such documentation is required in the event unqualified offerors request reasons for not being selected or file formal protests.

REQUEST FOR PROPOSALS

The request for proposal process is the most important step in the procurement process because it is the only opportunity, before selection, for:

- the utility to communicate its need to the prospective consultant; and
- the consultants to communicate their understanding and proposed approach to the utility.

The success of this process will in large part determine the success of the project. Failure in communication in either direction will result in a disillusioned utility and/or a consultant placed in a position in which he cannot meet the utility's needs or is unable to provide the required technical services.

The recommended process for maximizing communication and ensuring responsive proposals from prospective consultant is as follows:

- develop and provide each qualified prospective consultant with a request for proposal;
- conduct interviews with prospective consultant before proposal submission;
- receive and evaluate proposals; and
- interview the best two or three firms and select one firm for negotiation.

Following is a brief discussion of each step in the process.

Develop Request for Proposal

The request for proposal serves several purposes: it provides prospective consultants with information needed to develop their technical understanding and approach and tells them what other specific information the utility requires for evaluation purposes. The more background and technical information the utility can provide the prospective consultant, the more responsive the proposals will be. Only relevant information need be provided. The utility should <u>not</u> specify how the consultant should do the work. Exhibit 1 illustrates the topics normally covered in a request for proposals.

EXHIBIT 1

REQUEST FOR PROPOSAL OUTLINE

- COVER LETTER
- BACKGROUND OF PROJECT
- STATEMENT OR SCOPE OF WORK
- GENERAL INSTRUCTIONS FOR THE PREPARATION AND SUBMISSION OF TECHNICAL AND COST PROPOSALS
- CRITERIA USED TO EVALUATE PROPOSALS
  - Technical Approach
  - Firm Qualifications
  - Personnel Committed to Project
  - Project Management
  - Price
- LEGAL REQUIREMENTS
- ANTICIPATED CONTRACT PROVISIONS

The request for proposal should require the following information in addition to how and what the consultant proposes to do:

- estimated calendar time to perform the work;
- proposed key project personnel by name;
- proposed project management plan; and
- a cost proposal that details level of effort, cost per hour, and expenses.

The utility has several options when specifying the cost proposal requirements. It can elect to tell the consultant the maximum amount of money available for the contract. If this is done, responses will be keyed to what can be done for the amount of money available. While this approach results in more consistent responses from consultants, it also eliminates cost competitiveness.

If no level of effort information is provided by the utility, responses will vary substantially in price and scope. Cost competition, however, will be present.

A second option available to the utility is to specify the form of contracting. This can be:

- fixed price (lump sum);
- cost plus fixed fee; and
- time and material with or without an upset limit.

The advantages and disadvantages to each of these is discussed in Step 4, Negotiations.

Conduct Preliminary Interviews

The advantage of conducting preliminary interviews with each prospective consultant are:

- an opportunity for the utility staff to meet and assess the consultants;
- an opportunity to discuss the technical problems and provide the consultant with a better understanding of needs and expectations; and
- an opportunity to sharpen its own focus as a result of the discussions with professionals in the technical field.

The pre-proposal interview increases the consultant's ability to provide a far more responsive proposal because the interview process permits the exchange of details and information that cannot be easily conveyed in a written request for proposal.

Evaluate Proposals

The evaluation of the proposals should proceed exactly as the evaluation of the qualification submission. The principal difference is the criteria used to evaluate each proposal. Evaluation should be conducted in two stages; first the technical and management proposal should be evaluated, then the cost proposals should be evaluated.

The technical and management proposals should be evaluated with respect to:

- understanding of the problem or need;
- soundness of the proposed approach;
- recognition of potential problems and difficulties;
- key personnel to be assigned to the project; and
- reasonableness of the estimated time to complete each task.

Only after the proposals have been ranked based on the technical evaluation should the cost proposals be considered. Cost should be evaluated with respect to the quality of the technical proposal and personnel to be assigned to the project. Cost proposals should also be evaluated for completeness and reasonableness. The following items should be reviewed:

- Are any costs not included such as:
  - travel;
  - computer cost;
  - report production; and
  - other.
- Are the labor costs per hour in line with other firms?
- Is sufficient detail presented to allow evaluation and comparison with other cost proposals?

The lowest cost proposal is not always the best. For example, if the top ranked technical proposal is 10% more in cost, the evaluators may determine that the incremental cost is more than offset by the quality of the offeror's personnel, understanding of the problem, and soundness of approach.

For certain professional services, i.e. Architect-Engineer and Land Surveying, selection procedures typically do not consider cost. Rather, the selection is based on the demonstrated competence and qualifications of the competing firms and price is considered only during negotiation. This is considered, by many, to be more desirable if there is a lack of a definition scope of work. It gives both parties an opportunity to review in detail what is involved in the work such as estimates of man-hours, personnel costs, and alternatives to be considered. If a fair and reasonable fee can be negotiated with the highest qualified firm, the award would be made, without consideration of proposals and fees of competing firms. If the fee can not be negotiated successfully with the highest qualified firm, negotiations with other qualified firms would be initiated.

Whether or not cost is considered, the utility should at the completion of its proposal evaluation select the two or three best firms and set up interviews with each.

Conduct Final Interviews

The final interview round is the last opportunity for the utility to evaluate the prospective firms. The objective of the interview is to:

- answer any open questions or obtain clarifications on proposals; and
- get a "feel" for the consultants and determine if the utility staff can work comfortably with them.

Of major importance in the interview is to ensure that the key personnel to be assigned to the project are present and participate in the interview. Discussions with a polished "marketing man" provides no insights to the quality and ability of the staff who will perform the work.

At the completion of the interviews, a final evaluation is made and one firm is selected for negotiation.

CONTRACT NEGOTIATION

Contract negotiation is a critical step in the use of consultants. Final agreement on the following activities occur during contract negotiation:

- the scope of services to be performed;
- the method of contracting;
- the price; and
- the contract terms and conditions.

Scope of Services

The scope of services is a formal part of the contract and specifies exactly what the consultant will provide the utility. The scope of services should be complete and specific. Under no circumstances should there be an "understanding" on the part of the utility or consultant that is not explicitly reflected in the scope of services. In the event of a dispute or subsequent misunderstanding only the scope of services will be valid. The scope of services should delineate:

- tasks to be performed;
- schedule for performance;
- deliverables (reports, systems, drawings, etc.);
- review procedures; and
- numbers of reports to be delivered.

Contracting Method

The methods for contracting vary depending upon the nature of the work to be performed, the preference of the utility and consultant, and/or Federal, state or local requirements. Federal and state requirements are imposed when their funds are being used in whole or in part to pay the consultant.

The three basic types of contracts are:

- fixed price (lump sum);
- time and materials; and
- cost plus fixed fee.

Fixed Price

Fixed-price (lump-sum) contracts are agreements under which the consultant agrees to provide a specific service and/or product for a specific amount of money. Under fixed-price terms the consultant is obligated to provide the service and/or product for the specified price irrespective of any unforeseen difficulty or problem.

This type of contract is usually used by consultants when the service and/or product to be provided is of little risk and unforeseen problems unlikely, based on prior experience. The advantage to the utility is that the cost of service and/or product is fixed and will not be subject to change. The disadvantage to the utility is establishing a reasonable price since this type of contract provides the incentive for the consultant to complete the work for the least cost to maximize profit.

The second potential problem is that if the consultant does encounter difficulty and their costs exceed the contract amount, they are required to complete the work with their own time and money. This can result in the consultant trying to get "rid" of the job as quickly and expeditiously as possible.

Time and Materials

Time and materials contracts are agreements under which the utility pays only for the time worked, at an agreed upon rate. This type of contract is only used when the utility is not looking for a specific product or service but uses the consultant as an advisor. Examples include having a consultant attend a meeting, review a report, or work for a day or two with utility staff as an advisor.

The advantage of a time and materials contract is that they are simple to use and provide a mechanism to obtain time from a specialist without additional obligation. The disadvantage is that the consultant is obligated only to provide the time and has no requirement for results or products.

Cost Plus Fixed Fee

Cost plus fixed fee contracts are designed for large, difficult, and high-risk jobs or when required by Federal or state agencies. Under a cost plus fixed fee contract, the total labor, overhead, and expenses, net of fee or profit, to complete the job are estimated. A fixed fee or profit is then established. If over the course of the project it is determined that, through no fault of the consultant, costs will exceed the estimate, the costs may be adjusted to meet the increase. No change, however, is made in the fee or profit.

Conversely, if the consultant completes the job at a cost less than the estimate, there is no requirement to pay the balance of the estimate. The entire fixed fee, however, must be paid.

Cost plus fixed fee contracts are difficult to administer and, when cost estimates are adjusted, there is always a potential for dispute. The question which always arises is "whether increased costs are justified or did they result from the consultant's ineptness?"

Cost plus fixed fee contracts are normally used for large scale system development and implementation, major design contracts, and when the scope of work is difficult to define precisely.

Final Agreement on Price

Final price should always be negotiated when possible. Through careful discussion, it should be determined where costs can be cut or eliminated based upon services to be provided and/or reasonableness of expenses. Conversely, depending on the final scope revisions and discussions it may also be determined that additional costs should be added as a result of the utility's final requirements.

The objective of final price negotiation should not be "to get as much as possible" but rather to develop a fair and reasonable price for the service to be provided.

Contract Terms and Conditions

The major terms and conditions the contract should contain are:

- key personnel;
- subcontract provisions;
- penalties;
- change in scope
- termination rights;
- method of payment; and
- amendment provisions.

Other terms and conditions should be in compliance with federal, state, and local requirements.

Key Personnel

The utility should not allow the consultant to substitute key personnel of the project without written permission. If the utility conducted oral interviews in the preceding evaluation phase, it will have assessed personnel capabilities and will probably be able to specify those positions in the project that cannot be substituted without its approval.

Subcontractors

The utility should not allow the consultant to subcontract out portions or the project without its express permission. Subcontractors should receive the same review (scope, approach, capabilities, and cost) as the prime contractor.

Penalties

Penalty clauses should be included for such items as a failure to deliver or complete a project according to specifications, schedule, or costs. These clauses could be invoked at the option of the utility to promote high performance from the consultant. To minimize subsequent litigation, these penalties should not be punitive but should approximate the reduced value of the project to the utility should the failure occur. Also, a clause can be added that states that invoking such penalties would not prevent a subsequent suit for damages.

Conversely, there should be clauses that excuse delay or non-performance which occurs through no fault of the consultant. Examples could be a change in scope, a revision in laws, etc.

Termination Rights

Termination rights should also be spelled out. Sample clauses usually provide for termination: (1) at the option of the utililty and (2) upon mutual agreement of the parties to the contract. Reasons for termination should also be included, e.g., non-performance or change in needs.

Method of Payment

Method of payment provisions should include:

- invoice requirements;
- approval requirements;
- payment frequency; and
- hold back or retainage until completion of project.

Hold back or retainage provides the utility with a margin of protection in the event the project does not come to a successful completion or if there are omissions or errors in the work which need to be corrected.

PROJECT MANAGEMENT

The success of using a consultant depends upon maintaining communication and monitoring results. The utility should designate one individual to serve as the project manager. This individual would be responsible for:

- day-to-day contact with the consultant;
- coordination between the consultant and the utility;
- provision of any information or materials required by the consultant;
- review of the consultant's progress; and
- approval for interim requests for payment.

The individual assigned this responsibility would be required to follow the project from start to finish. The individual should be qualified in the consultant's field and should have sufficient authority to provide the consultant direction and perform the coordination role.

REFERENCES

1. Consulting Engineering: A Guide for the Engagement of Engineering Services, ASCE 1975.

2. State and Local Government Purchasing -- A Digest, The Council of State Governments, June 1974.

3. The Model Procurement Code, Articles 1-4, American Bar Association, February 1979.

4. Proposed Model Procurement Ordinance, Public Review draft, prepared for EPA by the ABA Coordinating Committee on a Model Procurement Code.

* U. S. GOVERNMENT PRINTING OFFICE : 1982 361-082/306